

# **National Park Spending and Payroll Impacts**

## **Fiscal Year 2005**



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## Introduction

This report provides updated estimates of National Park System visitor spending for Fiscal Year (FY) 2005<sup>1</sup> and extends the analysis to include impacts of the National Park Service (NPS) payroll on local economies. Visitor spending and local impacts are estimated using the Money Generation Model version 2 (MGM2—Stynes et al., 2000) based on FY 2005 park visits, spending averages from park visitor surveys and local area economic multipliers. Impacts of the NPS payroll are estimated based on FY 2005 payroll data for each park. Local area multipliers capture the induced effects of household spending by park employees.

Impacts are estimated for all park units with visitation data. Estimates of payroll impacts are also estimated for these parks and then extrapolated to administrative offices and other units without visit data. Impacts measure the direct and secondary effects of visitor spending and park payrolls on local economies in terms of jobs, income and value added. Impacts of construction activity and park purchases of goods and services from local firms are not included. Local regions are defined as a 50-mile radius<sup>2</sup> around each park.

Direct effects cover businesses selling goods and services directly to park visitors. Secondary effects include indirect and induced effects resulting from sales to backward-linked industries within the local region and household spending of income earned directly or indirectly from visitor spending. Sales in retail and wholesale trade sectors represent the margins accruing to local firms on goods sold to park visitors.

Jobs include full-time and part-time jobs. Seasonal positions are adjusted to an annual basis. Personal income covers wages and salaries, including income of sole proprietors and payroll benefits. Value added is the sum of personal income, profits and rents and indirect business taxes. It can also be defined as total sales net of the costs of all non-labor inputs. Value added is the preferred economic measure of the contribution of an industry or activity to the economy.

Systemwide totals are estimated by summing the spending and impact estimates for 360 park units that have visitation data. Results for individual parks are reported in an appendix.

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<sup>1</sup> October 1, 2004 through September 30, 2005.

<sup>2</sup> The 50-mile radius is a general average representing the primary impact region around most parks. The radius is closer to 30 miles for parks in urban settings and as large as 100 miles for some western parks. Economic multipliers are based on regions defined as groupings of counties to approximate a 50-mile radius of the park.

## Visitor Spending

The National Park System received 273 million recreation visits in FY 2005. Visitor spending was estimated by dividing visitors into segments with distinct spending patterns and applying spending averages based on surveys of park visitors at selected parks. As spending averages are measured on a party-day basis (party nights for overnight trips), the NPS counts of recreation visits are converted from person entries to a park to party days in the area by applying average party size, length of stay and park re-entry factors. This adjusts for some double counting of visits. To the extent possible, spending not directly related to a park visit is excluded<sup>3</sup>.

In FY 2005 there were 13.5 million overnight stays in the parks, representing 3% of all visits. Twenty-eight percent of park visits were day trips by local residents, 44% were day trips from 50 miles or more<sup>4</sup> and 28% involved an overnight stay near the park. Visitor spending depends mainly on the number of days spent in the local area and the type of lodging on overnight trips. Non-local day trips account for 36% of the party days spent in the local area, local day trips 27% and overnight stays 37%. Two-thirds of all overnight stays by park visitors are in motels, lodges or B&Bs outside the parks, another 21% are in campgrounds outside the parks and 12% are inside the parks in NPS campgrounds, lodges or backcountry sites.

MGM2 segment spending averages for 2005 are given in Table 1<sup>5</sup>. A typical park visitor party on a day trip spends \$43 if a local resident and \$63 if non-local (Table 1).

Table 1. National Park Visitor Spending in the Local Area by Segment, FY 2005 (\$ per Party per Day/Night)

Spending Category	Visitor Segment						
	Local Day Trip	Non-local Day Trip	Motel-In	Camp-In	Back-country	Motel-Out	Camp-Out
Motel, hotel cabin or B&B	\$0.00	\$0.00	\$104.59	\$0.00	\$5.32	\$88.07	\$0.00
Camping fees	\$0.00	\$0.00	\$0.00	\$17.61	\$2.36	\$0.00	\$24.22
Restaurants & bars	\$13.73	\$18.31	\$38.91	\$11.45	\$6.95	\$43.49	\$13.73
Amusements	\$4.88	\$8.54	\$13.42	\$7.32	\$4.10	\$14.64	\$15.86
Groceries	\$6.73	\$6.73	\$6.73	\$14.58	\$4.88	\$11.22	\$10.09
Gas & oil	\$7.57	\$15.14	\$13.62	\$16.65	\$10.60	\$13.62	\$16.65
Local transportation	\$0.57	\$1.14	\$2.27	\$1.14	\$0.51	\$2.27	\$1.14
<u>Souvenirs</u>	<u>\$9.24</u>	<u>\$12.99</u>	<u>\$17.09</u>	<u>\$10.51</u>	<u>\$10.46</u>	<u>\$20.06</u>	<u>\$6.48</u>
Total	\$42.72	\$62.84	\$196.63	\$79.26	\$45.19	\$193.37	\$88.17

On a party-night basis, spending by visitors on overnight trips varies from \$45 for backcountry campers to \$197 for visitors staying in park lodges. Campers spend \$88 per

<sup>3</sup> For example, spending during extended stays in an area visiting relatives, on business, or when the park visit was not the primary trip purpose. For most historical sites and parks in urban areas, spending for one day or night is counted for each park entry. Where several park units are within a 50-mile radius, adjustments are made for those visiting more than one park on the same day.

<sup>4</sup> Day trips include pass-through visitors not spending a night within 50 miles of the park, as well as stays with friends and relatives and in owned seasonal homes.

<sup>5</sup> These averages and the high and low variations thereof are applied to parks that lack spending data.

night if staying outside the park and \$79 if staying inside the park. Spending averages at individual parks vary from these Systemwide averages. For parks with visitor spending surveys the spending profiles are estimated directly from samples of visitors. For parks without visitor spending information, these averages are adjusted to capture differences between different types of parks (e.g. parks, parkways, recreation areas, historic sites and monuments), different regions (high and low spending areas), and in some cases unique spending opportunities (e.g., commercial rafting).

In total, park visitors spent \$10.4 billion in the local region surrounding the parks in FY 2005<sup>6</sup>. Local residents account for 10% of this spending (Table 2). Visitors staying in motels and lodges outside the parks account for over half of the total spending, while non-local visitors on day trips contribute about a quarter of all spending. Over half of the visitor spending is for lodging and restaurant meals (Figure 1).

Table 2. National Park Visits and Spending by Segment, FY 2005.

Segment	Visits in Party-Days/Nights (000's)	Avg Spending per Day (\$)	Total Spending \$Millions	Pct of Spending
Local day trip	28,139	\$37.29	\$1,049	10%
Non-local day trip	37,879	\$65.62	\$2,486	24%
Lodge--in park	1,252	\$236.01	\$296	3%
Camp--in park	2,913	\$82.78	\$241	2%
Backcountry campers	564	\$63.52	\$36	<1%
Motel--outside park	26,389	\$209.18	\$5,520	53%
<u>Camp--outside park</u>	<u>8,344</u>	<u>\$91.50</u>	<u>\$763</u>	<u>7%</u>
Total <sup>a</sup>	105,480	\$98.75	\$10,423	100%

a. Totals include 72,000 party nights and \$32 million in expenses of river runners at Grand Canyon National Park, which were added in separately.

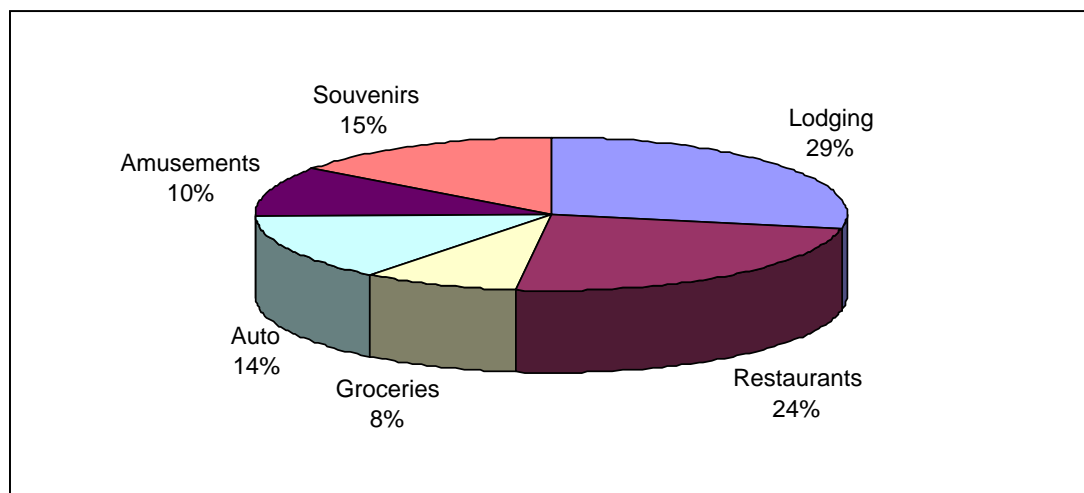


Figure 1. Distribution of National Park Visitor Spending, FY 2005.

<sup>6</sup> Spending figures exclude airfares and other trip spending beyond 50 miles of the park. Purchases of durable goods (boats, RVs) and major equipment are also excluded. Special expenses for commercial rafting trips, air overflights, and other special activities are not fully captured for all parks. Rafting fees at Grand Canyon are included.

## Impacts of Visitor Spending

Economic impacts of visitor spending are estimated in the MGM2 model using multipliers for local areas around each park<sup>7</sup>. This captures the direct and secondary economic effects in gateway communities around the parks in terms of jobs, personal income and value added. National totals are the sum of the local impacts for 360 park units that have counts of visitors.

Both economic *significance* and economic *impact* were estimated. The economic significance estimates in Table 3 measure the impacts of all visitor spending (\$10.4 billion), including that of local visitors. Economic impacts in Table 4 exclude spending by local residents, showing only the impacts of the \$9.4 billion spent by visitors who do not reside within the local region.

Economic impact measures attempt to estimate the likely losses in economic activity to the region in the absence of the park. Should the park opportunities not be available, it is assumed that local residents would spend the money on other local activities, while visitors from outside the region would not have made a trip to the region<sup>8</sup>. Spending by local residents on visits to the park do not represent “new money” to the region and are therefore generally excluded when estimating impacts. However, local resident spending is included in the economic significance measures, as these capture all economic activity associated with park visits, including local and non-local visitors.

Economic Significance. The \$10.4 billion spent by park visitors within 50 miles of a park (Table 2) has a total economic effect (significance) of \$12.2 billion in sales, \$4.4 billion in personal income and \$6.9 billion in value added. (This includes spending by local residents.) Visitor spending supports about 235,000 jobs in gateway regions. Total effects may be divided between the direct effects that occur in businesses selling goods and services directly to park visitors and secondary effects that result from the circulation of this money within the local economy<sup>9</sup>.

Direct effects are \$8.4 billion in sales, \$3.0 billion in personal income, \$4.5 billion in value added and 187,000 jobs. The local region captures 81% of all visitors’ spending as direct sales. The average sales multiplier across all local park regions is 1.46, which means each dollar of direct sales has a total local sales effect of \$1.46.

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<sup>7</sup> Sets of sector-specific multipliers in the MGM2 model were estimated with the IMPLAN system for four types of regions, varying in population size and levels of economic development. A region type is assigned to each park based on surrounding populations. IMPLAN’s Type II Multipliers were originally estimated with 1996 IMPLAN data for 114 distinct regions (Chang, 2001). Job-to-sales ratios have been adjusted to 2005 using the consumer price index.

<sup>8</sup> To the extent possible, spending not directly associated with the park visit is also excluded. For example, only one night’s expenses are counted for visitors in the area primarily on business, visiting relatives, or visiting other attractions.

<sup>9</sup> Secondary effects include indirect effects of businesses buying goods and services from backward-linked local firms and induced effects of household spending of their earnings.

Table 3. Economic Significance of National Park Visitor Spending to Local Economies, FY 2005.

Sector/Spending Category	Sales \$Millions	Jobs	Personal Income \$Millions	Value Added \$Millions
<u>Direct Effects</u>				
Motel, hotel cabin or B&B	\$2,664	52,644	\$876	\$1,332
Camping fees	\$236	4,666	\$78	\$118
Restaurants & bars	\$2,494	64,741	\$857	\$1,194
Amusements	\$1,066	28,576	\$372	\$609
Other vehicle expenses	\$108	1,107	\$33	\$52
Local transportation	\$31	773	\$18	\$21
Retail trade	\$1,248	31,012	\$642	\$1,003
Wholesale trade	\$220	2,255	\$90	\$153
<u>Local production of goods</u>	<u>\$320</u>	<u>1,033</u>	<u>\$27</u>	<u>\$53</u>
Total Direct Effects	8,387	186,807	2,992	4,535
<u>Secondary Effects</u>	<u>3,851</u>	<u>47,996</u>	<u>1,389</u>	<u>2,408</u>
Total Effects	12,238	234,803	4,381	6,943

Note: Includes spending of local residents on day trips. Direct sales are less than the \$10.4 billion in visitor spending as the manufacturing share of most retail purchases (groceries, gas, sporting goods and souvenirs) immediately leaks out of the region to cover the cost of goods sold. Sales figures for retail and wholesale trade are the margins on these purchases. A small share of the producer prices are assigned to local production.

Economic Impacts. Excluding the one billion dollars spent by local residents on park visits reduces the total spending to \$9.4 billion (Table 2) for the impact analysis. Local visitors represent about 30% of all visits, but only 10% of all visitors' spending. The total effects of visitor spending, excluding local residents, is \$11 billion in sales, \$3.9 billion in personal income, \$6.2 billion in value added and 211,000 jobs. The four economic sectors most directly affected are lodging, restaurants, retail trade and amusements. Visitor spending supports over 50,000 jobs in the hotel and restaurant sectors and over 25,000 in retail trade and amusements.

Table 4. Economic Impacts of National Park Visitor Spending on Local Economies, FY 2005.

Sector/Spending Category	Sales \$Millions	Jobs	Personal Income \$Millions	Value Added \$Millions
<u>Direct Effects</u>				
Motel, hotel cabin or B&B	\$2,629	52,283	\$867	\$1,318
Camping fees	\$233	4,634	\$77	\$117
Restaurants & bars	\$2,130	55,639	\$733	\$1,022
Amusements	\$934	25,203	\$327	\$535
Other vehicle expenses	\$93	958	\$29	\$45
Local transportation	\$31	768	\$18	\$21
Retail trade	\$1,044	26,105	\$539	\$842
Wholesale trade	\$184	1,899	\$75	\$128
<u>Local production of goods</u>	<u>\$262</u>	<u>834</u>	<u>\$22</u>	<u>\$42</u>
Total Direct Effects	7,539	168,323	2,685	4,070
<u>Secondary Effects</u>	<u>3,434</u>	<u>42,893</u>	<u>1,240</u>	<u>2,152</u>
Total Effects	10,974	211,216	3,925	6,222

Note: Excludes spending of local residents on day trips. Direct sales are less than the \$9.4 billion in non-local visitor spending, as the manufacturing share of most retail purchases (groceries, gas, sporting goods and souvenirs) leaks out of the region to cover the cost of goods sold. Sales for retail and wholesale trade are the margins on these purchases. A small share of the producer prices are assigned to local production.

### Impacts of NPS Payrolls

National Park System units also impact local economies through their own spending, especially NPS payrolls. In FY 2005 the NPS employed almost 24,000 people<sup>10</sup> with a total payroll of \$1.125 billion in wages and salaries and \$290 million in payroll benefits (Table 5). The local economic impacts of park payrolls are \$1.7 billion in personal income, \$1.9 billion in value added and 35,000 jobs.

Table 5. NPS Payroll Impacts on Local Economies.

Payroll	Salary \$Millions	Payroll Benefits \$Millions	Jobs
Park units with visit data	755	198	17,243
<u>Other units</u>	<u>370</u>	<u>92</u>	<u>6,735</u>
Total	1,125	290	23,978
	Personal Income \$Millions	Value Added \$Millions	Jobs
Local Impacts			
Park units with visit data	1,154	1,303	25,303
<u>Other units</u>	<u>567</u>	<u>640</u>	<u>9,883</u>
Total	1,721	1,943	35,186

<sup>10</sup> The number of employees is estimated as an annual average for each park, so that seasonal positions are converted to annual equivalents. However, the job estimates include both full-time and part-time positions.

Impacts of park payrolls for each park unit were estimated by applying economic multipliers to wage and salary data to capture the induced effects of NPS employee spending on local economies. As with the MGM2 model, distinct multipliers were used for parks in rural areas, parks in or near small cities and parks in larger metropolitan regions<sup>11</sup>. The overall employment multiplier for NPS jobs is 1.5. That is, for every two NPS jobs, another job is supported through the induced effects of employee spending in the local region. There are additional local economic effects from NPS purchases of goods and services from local suppliers and from construction activity. These impacts were not estimated.

The visitor spending and payroll impacts may be combined, as park admission fees and most other visitor spending accruing to the NPS were omitted from the visitor spending figures to avoid double counting<sup>12</sup>. Using the visitor spending impact estimates from Table 4, which exclude spending of local visitors, the combined impacts are \$5.6 billion in personal income, \$8.2 billion in value added and 246,000 local jobs. Visitor spending accounts for 86% of the total jobs and 76% of the total value added (Table 6).

**Table 6. Combined Impacts - Visitor Spending and Payroll.**

Impact Measure	Visitor Spending <sup>a</sup>	NPS Payroll	Combined	Visitor Spending Pct
<u>Direct Effects</u>				
Personal income (\$Millions)	2,685	1,415	4,100	65%
Value added (\$Millions)	4,070	1,415	5,485	74%
Jobs	168,323	23,978	192,301	88%
<u>Total Effects</u>				
Personal income (\$Millions)	3,925	1,721	5,646	70%
Value added (\$Millions)	6,222	1,943	8,165	76%
Jobs	211,216	35,186	246,402	86%

a. Excludes spending by local residents on day trips.

### **Trends 2001-2005**

Recent trends in national park visits, visitor spending and impacts are summarized in Table 7. Spending and economic impacts follow the trends in recreation visits. A small decline in visits in 2005 was offset by price increases of 3%, yielding an increase in overall visitor spending of 1.4%. Figures for 2001-2004 are on a calendar year (CY) basis; 2005 figures are for the fiscal year. For consistency with prior years, spending and impact figures in this table include local visitors.

<sup>11</sup> Multipliers for household spending were estimated in IMPLAN using the spending patterns of households with incomes of \$50,000 - \$75,000.

<sup>12</sup> There will be some double counting of camping fees because payments to concessioners could not be fully sorted out from payments to the NPS.

Table 7. NPS System Recreation Visits, Spending and Impacts 2001-2005 <sup>a</sup>.

	CY 2001	CY 2002	CY 2003	CY 2004	FY 2005
Recreation visits (millions)	279.216	277.300	266.100	276.908	272.606
Party days/nights (millions) <sup>b</sup>	108.296	107.553	103.206	107.335	105.553
Spending per party day	\$88	\$88	\$91	\$96	\$99
Total spending (\$Millions)	\$9,541	\$9,509	\$9,403	\$10,281	\$10,423
Direct <sup>c</sup> sales (\$Millions)	\$7,875	\$7,887	\$7,741	\$8,407	\$8,387
Direct jobs	193,726	191,381	183,767	193,478	186,807
Direct income (\$Millions)	\$2,783	\$2,787	\$2,737	\$2,973	\$2,992
Direct value added (\$Millions)	\$4,218	\$4,222	\$4,148	\$4,506	\$4,535
Total <sup>d</sup> sales (\$Millions)	\$11,444	\$11,459	\$11,240	\$12,206	\$12,238
Total jobs	243,934	240,806	231,102	243,398	234,803
Total income (\$Millions)	\$4,076	\$4,080	\$4,004	\$4,349	\$4,381
Total value added (\$Millions)	\$6,450	\$6,455	\$6,336	\$6,884	\$6,943

Note: All dollar figures are actual dollars, not adjusted for inflation. Figures for 2001-2004 are on a calendar year basis; 2005 figures are for the fiscal year.

- a. Spending and impact figures include visitors from the local area. In 2005, 30% of recreation visits were by residents living within 50 miles of the park and these local visitors accounted for 10% of all spending. Impacts excluding local spending are therefore about 90% of the impacts including locals.
- b. Adjusts visits for park re-entries, party sizes and length of stay in the region, which is measured in days for day trips and nights for overnight trips. To the extent possible, only days/nights in the local area directly related to the park visit are counted. Average party sizes range from 2.0 - 3.0 across parks and visitor segments. Systemwide, the average party size is 2.6.
- c. Direct effects accrue to tourism-related businesses selling goods and services directly to park visitors. Jobs include full-time and part-time jobs. Seasonal jobs are adjusted to an annual basis. Income is personal income, including wages and salaries, income of sole proprietors and payroll benefits. Value added includes all personal income, rents and profits and indirect business taxes.
- d. Total effects include direct, indirect and induced effects in the local regions around NPS units

## Methods

Spending and impacts were estimated using the Money Generation Model version 2. National Park Service public use statistics for FY 2005 provide estimates of the number of recreation visits and overnight stays at each park. For each park, recreation visits were allocated to the seven MGM2 segments<sup>13</sup>, converted to party days/nights spent in the local area and then multiplied by per-day spending averages for each segment.

Spending averages for seven distinct visitor segments based on visitor surveys at selected national parks over the past six years were price adjusted to 2005 using Bureau of Labor Statistics (BLS) price indices. Spending averages cover all trip expenses within roughly 50 miles of the park. Therefore, they exclude most en-route expenses on longer trips, as well as airfares and purchases made at home in preparation for the trip, including costs of durable goods and equipment.

<sup>13</sup> Visits are classified as local day trips, non-local day trips and overnight trips staying in campgrounds or hotels, lodges, cabins and B&Bs. For parks with lodging facilities within the park, visitors staying in park lodges, campgrounds or backcountry sites are distinguished from those staying outside the park in motels or non-NPS campgrounds. Visitors staying with friends or relatives, in owned seasonal homes or passing through without a local overnight stay are generally treated as day trips.

Spending averages vary from park to park based on the type of park and the regional setting (low, medium or high spending area). For parks with recent visitor surveys, spending averages are estimated directly from the survey data with some adjustments for off-season use<sup>14</sup>. Parks without recent visitor spending studies are assigned the MGM2 high, medium or low spending profiles based on manager or researcher judgments.

Multipliers for local regions around national parks<sup>15</sup> were applied to the spending totals to translate spending into jobs, income and value added and also to estimate secondary effects. Spending and impact estimates for 2005 are made individually for each park unit and then summed to obtain Systemwide totals. The Systemwide totals are therefore a sum of local impacts at each park, not an overall estimate of the impacts on the national economy<sup>16</sup>.

With the exception of a few parks with new visitor surveys, no changes were made in party sizes, lengths of stay or re-entry factors between the last update in CY 2003 and FY 2005. Local economic ratios and multipliers were also assumed constant, except for job-to-sales ratios, which were adjusted to 2005 based on the consumer price index. MGM2 model parameters for individual parks are adjusted over time as new park visitor studies are conducted or other relevant information becomes available.

Impacts of park payrolls were estimated for each park by applying local area multipliers to NPS wage and salary figures for FY 2005. Multipliers capture the induced effects of park employees' spending by re-circulating their income as household spending within the local economy. Four sets of multipliers were estimated to capture variations in impacts across regions based on population size<sup>17</sup>. Local impacts of park purchases of supplies and services or construction activities were not included in the analysis.

The number of employees for each park was estimated by totaling the number of distinct social security numbers in each pay period and dividing by the number of pay periods. The figure is therefore an annual average. Four seasonal jobs for three months count as one job. No distinction is made between part-time and full-time employees.

Jobs, salaries and payroll benefits are assigned to the park where the employee's time was charged, which may differ from their duty station. Where possible, the unit "org" codes were used to separate out payroll data for parks that are administered under a different park "alpha" code.

Payroll impact estimates were not made for individual organizational units that did not have public use data, such as regional offices, a variety of other administrative units, and

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<sup>14</sup> Most park surveys are conducted during the peak season, so estimates of segment shares and spending must be adjusted for seasonal differences.

<sup>15</sup> Multipliers are developed using the IMPLAN input-output modeling system (MIG, Inc.).

<sup>16</sup> Applying park visitor spending to a national model/set of multipliers would capture 98% of visitor spending as direct sales (instead of the 81% that accrues to firms in the local regions around each park) and would also yield significantly larger secondary effects. National sales multipliers for tourism spending are about 2.5, while the average sales multiplier for local regions around parks is only 1.5.

<sup>17</sup> IMPLAN's spending patterns for households averaging \$50,000 - \$75,000 were used to estimate the multipliers.

some park units. Impacts for these units as a whole were estimated by extrapolating from the impact estimates for covered parks. As covered parks accounted for two-thirds of all NPS wages and salaries, the local impacts for all non-covered parks were estimated at one-third of the total for all covered parks. Payroll benefits were not re-circulated in estimating secondary effects of park employee spending, but the direct payroll benefits are included in total value added.

### **Errors and Limitations**

The accuracy of the spending and impact estimates rests largely on the input data, namely (1) public use recreation visit and overnight stay data, (2) party size, length of stay and park re-entry conversion factors, (3) visitor segment shares, (4) spending averages and (5) local area multipliers.

Public use data provides reasonably accurate estimates of visitor entries for most parks. Some visitors may be missed by the counting procedures, while others may be counted multiple times when they re-enter a park more than once on a single trip. Accurate estimates of park re-entries, party sizes and lengths of stay in the area are needed to convert park entries to the number of visitor or party days in the region. Visitors staying overnight outside the park pose significant problems as they tend to be the greatest spenders and may enter the park several times during their stay. Similarly, visitors staying inside the park may enter and leave several times during their stay and be counted each time as a distinct visit. Re-entry factors adjust for these problems to the extent possible.

For multi-purpose trips, it is difficult to determine what portion of the spending should be attributed to the park visit. This is especially a problem for historic sites and parks in urban areas or parks in multi-attraction destinations. For parks with NPS Visitor Services Project (VSP) surveys, the proportion of days and spending to count is decided based on the stated trip purpose and the importance of the park in generating the trip. For other parks it can only be approximated.

Parkways and urban parks pose special difficulties for economic impact analyses. These units have some of the highest number of visits while posing the most difficult problems for estimating visits, spending and impacts. The majority of visits to these types of units were assumed to be local or day trips, and spending averages were set at the lowest levels. However, due to the high numbers of visits, even a small change in spending averages or the segment mix can swing the spending estimates by millions of dollars. Decisions on how to handle these parks significantly influences the overall totals.

Clusters of parks within a single 50-mile area pose additional difficulties. For example, the many monuments and parks in the Washington, D.C. area each count visitors separately. How many additional trips to Washington, D.C. or extra spending were generated by the over 5 million visits counted at the new National World War II Memorial dedicated in 2004? Perhaps there were substantial numbers of visitors for the dedication, but likely not 5 million new visitors to the city in 2005. To avoid double counting of spending across many national capital parks, we must know how many times a visitor has been counted at park units during a trip to the Washington, D.C. area. For parks in the National Capital Region, we currently assume an average of 1.7 park visits

are counted for local day trips, 3.4 for non-local day trips and 5.0 park visits on overnight trips.

Similar difficulties exist for clusters of parks in Boston, New York and San Francisco. Double counting of visits at Sequoia and Kings Canyon national parks was sorted out based on vehicle counts at each entrance (Stynes and Sun, 2003). For parks that are at least 50 miles apart, the MGM2 procedure assigns spending based on the number of days/nights spent in the local area. Therefore, it avoids double counting of spending for visitors on extended trips visiting several parks that are at least 50 miles apart, which is a common pattern at many western parks.

The segment mix is very important in estimating visitor spending because spending varies considerably across the MGM2 segments. Segment shares are estimated based on park overnight stay data and, where available, park visitor surveys. For the majority of park units that lack visitor surveys, estimates are made by generalizing from studies at similar parks or based on manager or researcher judgment.

For parks with VSP studies, spending averages are estimated from the surveys of the parks' own visitors. These averages are then price-adjusted each year until a new survey becomes available. Sampling errors for the spending averages in VSP studies are generally 5-10% overall, and as high as 20% for individual visitor segments. The observed patterns in park visitor studies are then used to estimate spending averages for other parks that lack visitor spending surveys. This procedure will not capture spending variations attributable to unique characteristics of a given park or gateway region, for example, the wider use of public transportation and buses at Alaska parks or extra expenses for special commercial attractions in or around some parks, such as rafting trips and air tours. When visitor studies are conducted at individual parks, these unique situations may be taken into account. For example, river runners were treated as a distinct segment at Grand Canyon National Park using concessioner data to make the spending estimates (Stynes and Sun, 2005).

Estimates of jobs, income and value added rest on economic ratios and multipliers for local regions around each park. For most parks, we use the generic multipliers built into the MGM2 model (Stynes and Sun, 2000)<sup>18</sup>. The appropriate generic multipliers for each park are selected based on the population of the surrounding region. Generic multipliers were estimated as averages across 19-44 distinct IMPLAN models for each type of region. The maximum observed absolute deviations between the IMPLAN multipliers for individual regions and the corresponding generic multiplier for that region were generally 10% or less, and on average the differences were less than 5% (Chang 2001). The larger deviations, typically in job-to-sales ratios, were just as likely to be due to errors in the underlying IMPLAN data as in the generics. In this respect, the generic multipliers may serve to average out the errors in the IMPLAN data for individual regions.

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<sup>18</sup> For some parks we have used custom IMPLAN models estimated for the county or counties around the park to derive the multipliers. In all of these cases, the impact results with the custom multipliers were not significantly different than with the appropriate generics.

The generic approach to multipliers works well for tourism-related applications because the vast majority of visitor spending accrues to service industries, which generally exist in an area in direct proportion to population size. Further, the IMPLAN estimates of the most important ratios of income and value added to sales are essentially constant across regions since IMPLAN uses a national average production function for each sector. Only the IMPLAN estimates of job-to-sales ratios and secondary effects vary significantly between regions, and these are captured quite well for service and retail sectors by the population of the region.

### **Suggestions for Further Research**

Refinements to the impact estimates should therefore focus primarily on the visitation data, especially the extent of potential double counting of visitors (due to re-entries to parks and parks in close proximity to one another) and the visitor segment mix at each park (especially trips involving overnight stays outside the park). Deciding what proportion of trips and spending should be attributed to a park visit is another difficult issue, particularly for smaller parks and historic sites that may not be the primary reason for a trip, but instead something for tourists to do while in an area.

Additional visitor-spending studies would be useful to improve the spending averages and better explain differences between parks. Studies of particular visitor segments with high or unique spending patterns might be tackled by sampling these groups at several parks using a common design. Examples include national park campers and visitors in lodges, backcountry visitors, river runners, visitors on bus tours and school groups, particularly at historic sites and nature centers. These types of visitors are often missed in VSP studies, or the samples are too small to yield reliable spending averages.

At some point the MGM2 multipliers should be updated. The generic multipliers currently in use were developed using 1996 IMPLAN, based on SIC codes. In 2001 IMPLAN converted to a NAICS basis. The procedures used to develop the generic multipliers five years ago could be repeated using more recent IMPLAN data. With additional work, one could also develop individual multipliers for each park using the IMPLAN system.

Spending and impact totals for states were developed from the FY 2005 estimates by simply summing the results for all units in a given state. There are, however, no guidelines on how to divide spending for parks that fall within more than one state. The locations of park entrances and commercial development outside the park dictate where the impacts will occur. Sorting this out will require more detailed spatial analysis of visitor use patterns and economic activity at selected parks. This is a good candidate for use of GIS methods.

Other potentially productive areas of research would be to utilize more fully concessioner data in estimating or validating spending estimates. In addition, studies could be conducted in cooperation with local tourism interests to improve understanding of the role parks in attracting visitors to an area, patterns of use within and outside parks and the extent and use of lodging facilities near parks.

The economic impact analyses are more useful for some parks than others. Oddly, the parks with the smallest local economic effects often show the greatest interest in economic impact estimates. Parks with small numbers of visitors, parks serving mostly local residents, nature preserves and many historic sites and monuments in metropolitan regions do not generate significant local economic impacts. A focus on spending and economic impacts for these units may distract stakeholders from their greater educational, historic, environmental and recreational values. The effort expended in estimating economic impacts for these parks might better be allocated to those parks that contribute significantly to the local economy.

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## **Appendix**

Visitor Spending and Payroll Impacts by Park, Fiscal Year 2005

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

	Public Use Data		Visitor Spending 2005 (\$000's)		Impacts of Non-local Visitor Spending		
Park	2005 Recreation Visits	2005 OVN stays	All Visitors	Non-local Visitors	Jobs	Personal Income (\$000's)	Value Added (\$000's)
Abraham Lincoln Birthplace NHS	194,466	0	\$6,656	\$6,212	148	\$2,176	\$3,468
Acadia NP	2,103,398	111,673	\$127,236	\$124,482	2,796	\$51,537	\$81,560
Adams NHS	211,717	0	\$13,457	\$12,560	272	\$5,873	\$9,296
Agate Fossil Beds NM	14,168	0	\$485	\$453	11	\$159	\$253
Alibates Flint Quarries NM	2,385	0	\$117	\$109	2	\$45	\$71
Allegheny Portage Railroad NHS	117,080	0	\$5,724	\$5,343	120	\$2,212	\$3,501
Amistad NRA	1,449,047	17,204	\$39,224	\$34,047	812	\$11,927	\$19,008
Andersonville NHS	133,369	0	\$4,565	\$4,260	102	\$1,492	\$2,378
Andrew Johnson NHS	48,816	0	\$2,387	\$2,228	50	\$922	\$1,460
Aniakchak NM & Pres	285	530	\$9	\$8	0	\$3	\$5
Antietam NB	281,009	0	\$12,791	\$11,482	258	\$4,754	\$7,523
Apostle Islands NL	153,433	25,957	\$7,244	\$6,901	164	\$2,417	\$3,853
Appomattox Court House NHP	142,009	0	\$6,943	\$6,480	146	\$2,683	\$4,246
Arches NP	772,901	52,511	\$72,850	\$72,850	1,736	\$25,519	\$40,671
Arkansas Post NMem	37,761	2	\$1,292	\$1,206	29	\$423	\$673
Arlington House, The Robert E. Lee Mem	495,948	0	\$31,523	\$29,421	637	\$13,759	\$21,775
Assateague Island NS	2,049,666	114,987	\$139,943	\$133,087	2,989	\$55,100	\$87,198
Aztec Ruins NM	44,735	0	\$1,357	\$1,308	29	\$542	\$857
Badlands NP	924,354	37,581	\$19,019	\$19,019	453	\$6,662	\$10,618
Bandelier NM	248,941	13,295	\$10,689	\$10,256	230	\$4,246	\$6,720
Bent's Old Fort NHS	28,060	0	\$960	\$896	21	\$314	\$500
Bering Land Bridge NPres	2,725	0	\$130	\$123	3	\$43	\$69
Big Bend NP	426,829	181,877	\$16,962	\$16,170	385	\$5,664	\$9,027
Big Cypress NPres	719,416	51,654	\$63,772	\$60,663	1,313	\$28,369	\$44,897
Big Hole NB	55,551	0	\$1,901	\$1,774	42	\$622	\$991
Big South Fork NRR	697,412	70,283	\$23,359	\$20,039	478	\$7,020	\$11,188
Big Thicket NPres	97,071	1,510	\$6,592	\$6,262	141	\$2,593	\$4,103
Bighorn Canyon NRA	188,184	13,590	\$5,211	\$4,555	109	\$1,596	\$2,543
Biscayne NP	512,760	0	\$29,807	\$29,477	638	\$13,785	\$21,816
Black Canyon of the Gunnison NP	185,065	13,917	\$8,842	\$8,412	201	\$2,947	\$4,696
Blue Ridge Parkway	17,548,386	121,465	\$309,675	\$279,763	6,283	\$115,825	\$183,298
Bluestone NSR	44,434	0	\$1,711	\$1,483	33	\$614	\$972
Booker T. Washington NM	17,181	0	\$840	\$784	18	\$325	\$514
Boston African American NHS	314,966	0	\$20,020	\$18,685	404	\$8,738	\$13,829
Boston NHP	2,020,983	0	\$63,789	\$61,384	1,329	\$28,706	\$45,431
Brown V. Board of Education NHS	19,164	0	\$1,218	\$1,137	0	\$0	\$0
Bryce Canyon NP	1,005,960	126,349	\$49,766	\$47,477	1,132	\$16,631	\$26,506
Buck Island Reef NM	49,457	3,920	\$3,382	\$3,218	77	\$1,127	\$1,797
Buffalo National River	1,011,338	98,498	\$28,185	\$24,691	589	\$8,649	\$13,784
Cabrillo NM	838,328	0	\$53,285	\$49,732	1,076	\$23,257	\$36,807
Canaveral NS	1,031,471	2,217	\$70,169	\$66,646	1,497	\$27,592	\$43,666
Cane River Creole NHP	26,730	0	\$1,307	\$1,220	29	\$427	\$681
Canyon de Chelly NM	822,276	63,538	\$42,035	\$39,435	886	\$16,327	\$25,838

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

	Public Use Data		Visitor Spending 2005 (\$000's)		Impacts of Non-local Visitor Spending		
Park	2005 Recreation Visits	2005 OVN stays	All Visitors	Non-local Visitors	Jobs	Personal Income (\$000's)	Value Added (\$000's)
Canyonlands NP	391,441	97,151	\$18,307	\$17,460	416	\$6,116	\$9,748
Cape Cod NS	3,706,094	25,748	\$120,635	\$89,691	2,138	\$31,419	\$50,073
Cape Hatteras NS	2,252,133	82,322	\$69,325	\$65,246	1,555	\$22,856	\$36,426
Cape Krusenstern NM	4,447	0	\$152	\$142	3	\$50	\$79
Cape Lookout NS	701,758	29,942	\$34,124	\$32,473	774	\$11,375	\$18,129
Capitol Reef NP	543,593	35,258	\$25,985	\$24,717	589	\$8,658	\$13,799
Capulin Volcano NM	56,467	0	\$1,389	\$1,367	33	\$479	\$763
Carl Sandburg Home NHS	26,357	0	\$1,289	\$1,203	27	\$498	\$788
Carlsbad Caverns NP	413,923	136	\$19,005	\$18,375	413	\$7,608	\$12,039
Casa Grande Ruins NM	97,520	0	\$2,835	\$2,671	64	\$936	\$1,491
Castillo de San Marcos NM	610,110	0	\$38,780	\$36,194	783	\$16,926	\$26,787
Castle Clinton NM	3,355,705	0	\$81,891	\$73,430	1,589	\$34,339	\$54,346
Catoctin Mountain Park	516,169	39,877	\$25,487	\$23,854	536	\$9,876	\$15,629
Cedar Breaks NM	503,370	1,586	\$17,235	\$16,088	383	\$5,635	\$8,981
Central High School NHS	45,438	0	\$2,222	\$2,073	47	\$858	\$1,359
Chaco Culture NHP	55,426	18,532	\$1,735	\$1,699	38	\$703	\$1,113
Chamizal NMem	215,361	0	\$13,689	\$12,776	277	\$5,975	\$9,456
Channel Islands NP	361,327	111,701	\$32,256	\$30,841	668	\$14,423	\$22,826
Charles Pinckney NHS	32,688	0	\$1,598	\$1,492	34	\$618	\$977
Chattahoochee River NRA	2,489,703	0	\$65,272	\$43,854	949	\$20,508	\$32,457
Chesapeake & Ohio Canal NHP	3,106,952	4,595	\$35,646	\$23,192	502	\$10,845	\$17,164
Chickamauga & Chattanooga NMP	914,491	1,724	\$44,723	\$41,744	938	\$17,283	\$27,350
Chickasaw NRA	1,307,192	82,748	\$36,142	\$31,564	752	\$11,057	\$17,622
Chiricahua NM	54,181	9,240	\$2,707	\$2,542	57	\$1,052	\$1,666
Christiansted NHS	107,418	0	\$3,676	\$3,431	82	\$1,202	\$1,916
City of Rocks NRes	66,532	0	\$4,527	\$4,300	97	\$1,780	\$2,817
Clara Barton NHS	13,060	0	\$830	\$775	17	\$362	\$573
Colonial NHP	3,339,020	0	\$45,358	\$41,283	894	\$19,306	\$30,554
Colorado NM	352,430	14,530	\$17,321	\$16,191	364	\$6,703	\$10,608
Congaree NP	97,694	1,794	\$4,783	\$4,467	100	\$1,849	\$2,927
Coronado NMem	86,749	0	\$2,969	\$2,771	66	\$971	\$1,547
Cowpens NB	209,347	36	\$10,236	\$9,553	215	\$3,955	\$6,259
Crater Lake NP	431,299	54,219	\$29,462	\$28,598	682	\$10,018	\$15,966
Craters of the Moon NM & Pres	207,681	12,864	\$7,164	\$6,701	160	\$2,347	\$3,741
Cumberland Gap NHP	1,020,732	14,217	\$49,981	\$46,672	1,048	\$19,323	\$30,579
Cumberland Island NS	40,439	17,162	\$2,752	\$2,637	59	\$1,092	\$1,727
Curecanti NRA	904,433	48,414	\$35,571	\$31,029	697	\$12,846	\$20,330
Cuyahoga Valley NP	2,837,053	6,474	\$54,968	\$39,653	858	\$18,543	\$29,348
Dayton Aviation Heritage NHP	48,699	0	\$3,095	\$2,889	63	\$1,351	\$2,138
De Soto NMem	243,300	0	\$15,465	\$14,433	312	\$6,750	\$10,682
Death Valley NP	736,285	253,509	\$37,026	\$35,499	846	\$12,435	\$19,818
Delaware Water Gap NRA	5,052,261	90,674	\$120,643	\$105,610	2,372	\$43,724	\$69,195
Denali NP & Pres	396,458	115,395	\$27,072	\$25,868	581	\$10,710	\$16,949
Devils Postpile NM	75,983	4,033	\$2,618	\$2,448	58	\$858	\$1,367
Devils Tower NM	370,911	10,980	\$12,743	\$11,906	284	\$4,171	\$6,647

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

<b>Park</b>	<b>Public Use Data</b>		<b>Visitor Spending 2005 (\$000's)</b>		<b>Impacts of Non-local Visitor Spending</b>		
	<b>2005 Recreation Visits</b>	<b>2005 OVN stays</b>	<b>All Visitors</b>	<b>Non-local Visitors</b>	<b>Jobs</b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Dinosaur NM	374,876	58,189	\$12,898	\$12,094	288	\$4,237	\$6,752
Dry Tortugas NP	68,145	16,053	\$6,118	\$5,843	126	\$2,732	\$4,324
Edgar Allan Poe NHS	11,992	0	\$762	\$711	15	\$333	\$527
Edison NHS	0	0	\$0	\$0	0	\$0	\$0
Effigy Mounds NM	85,505	0	\$2,926	\$2,731	65	\$957	\$1,525
Eisenhower NHS	69,134	0	\$3,964	\$3,936	94	\$1,379	\$2,197
El Malpais NM	118,435	688	\$4,240	\$4,060	97	\$1,422	\$2,267
El Morro NM	52,545	2,746	\$1,799	\$1,719	41	\$602	\$959
Eleanor Roosevelt NHS	55,786	0	\$1,909	\$1,782	42	\$624	\$995
Eugene O'Neill NHS	2,824	0	\$179	\$168	4	\$78	\$124
Everglades NP	1,243,932	99,588	\$62,526	\$60,323	1,306	\$28,209	\$44,645
Federal Hall NMem	24,685	0	\$1,569	\$1,464	32	\$685	\$1,084
Fire Island NS	747,510	44,580	\$37,632	\$31,250	702	\$12,938	\$20,474
Florissant Fossil Beds NM	60,179	0	\$2,942	\$2,746	62	\$1,137	\$1,799
Ford's Theatre NHS	839,091	0	\$22,860	\$20,509	444	\$9,591	\$15,179
Fort Bowie NHS	9,250	0	\$452	\$422	9	\$175	\$277
Fort Caroline NMem	150,529	0	\$9,568	\$8,930	193	\$4,176	\$6,609
Fort Davis NHS	55,624	0	\$1,904	\$1,777	42	\$622	\$992
Fort Donelson NB	212,570	97	\$7,276	\$6,791	162	\$2,379	\$3,791
Fort Frederica NM	345,502	0	\$16,893	\$15,766	354	\$6,527	\$10,330
Fort Laramie NHS	48,418	0	\$1,657	\$1,547	37	\$542	\$863
Fort Larned NHS	34,274	0	\$1,173	\$1,095	26	\$384	\$611
Fort Matanzas NM	1,018,450	0	\$64,734	\$60,418	1,308	\$28,254	\$44,716
Fort McHenry NM & HS	621,716	0	\$39,517	\$36,882	798	\$17,248	\$27,297
Fort Necessity NB	109,070	214	\$3,446	\$2,971	71	\$1,041	\$1,659
Fort Point NHS	1,729,426	0	\$109,925	\$102,595	2,221	\$47,978	\$75,931
Fort Pulaski NM	297,017	188	\$14,523	\$13,555	304	\$5,612	\$8,881
Fort Raleigh NHS	273,457	0	\$9,359	\$8,735	208	\$3,060	\$4,877
Fort Scott NHS	25,563	0	\$875	\$817	19	\$286	\$456
Fort Smith NHS	72,068	0	\$3,524	\$3,289	74	\$1,362	\$2,155
Fort Stanwix NM	36,166	0	\$1,197	\$1,148	26	\$475	\$752
Fort Sumter NM	781,042	0	\$18,130	\$15,818	342	\$7,397	\$11,707
Fort Union NM	11,798	0	\$262	\$250	6	\$88	\$140
Fort Union Trading Post NHS	17,387	0	\$595	\$555	13	\$195	\$310
Fort Vancouver NHS	786,800	0	\$38,469	\$35,904	806	\$14,865	\$23,524
Fort Washington Park	304,370	0	\$8,292	\$7,439	161	\$3,479	\$5,506
Fossil Butte NM	17,916	0	\$613	\$572	14	\$200	\$320
Franklin Delano Roosevelt Memorial	3,055,625	0	\$83,248	\$74,684	1,616	\$34,925	\$55,274
Frederick Douglass NHS	25,432	0	\$693	\$622	13	\$291	\$460
Frederick Law Olmsted NHS	4,053	0	\$258	\$240	5	\$112	\$178
Fredericksburg & Spotsylvania NMP	532,369	0	\$26,029	\$24,294	546	\$10,058	\$15,917
Friendship Hill NHS	29,852	0	\$1,897	\$1,771	38	\$828	\$1,311
Gates of the Arctic NP & Pres	9,461	4,383	\$424	\$405	10	\$142	\$226
Gateway NRA	8,398,209	9,115	\$135,699	\$55,063	1,192	\$25,750	\$40,753
Gauley River NRA	137,910	5,520	\$5,397	\$4,701	106	\$1,946	\$3,080

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

<b>Park</b>	<b>Public Use Data</b>		<b>Visitor Spending 2005 (\$000's)</b>		<b>Impacts of Non-local Visitor Spending</b>		
	<b>2005 Recreation Visits</b>	<b>2005 OVN stays</b>	<b>All Visitors</b>	<b>Non-local Visitors</b>	<b>Jobs</b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
General Grant NMem	76,627	0	\$4,871	\$4,546	98	\$2,126	\$3,364
George Rogers Clark NHP	127,935	0	\$6,255	\$5,838	131	\$2,417	\$3,825
George Washington Birthplace NM	61,903	0	\$3,027	\$2,825	63	\$1,170	\$1,851
George Washington Carver NM	45,563	0	\$2,228	\$2,079	47	\$861	\$1,362
George Washington Memorial Pkwy	6,872,949	0	\$27,309	\$3,927	85	\$1,837	\$2,907
Gettysburg NMP	1,716,467	29,852	\$97,123	\$96,439	2,299	\$33,782	\$53,840
Gila Cliff Dwellings NM	40,183	0	\$1,017	\$979	23	\$343	\$546
Glacier Bay NP & Pres	324,725	10,579	\$15,613	\$14,846	354	\$5,200	\$8,288
Glacier NP	1,950,223	331,036	\$77,662	\$74,130	1,665	\$30,691	\$48,569
Glen Canyon NRA	1,932,993	1,158,972	\$124,048	\$120,547	2,707	\$49,908	\$78,981
Golden Gate NRA	13,191,492	54,685	\$216,672	\$90,170	1,952	\$42,167	\$66,735
Golden Spike NHS	40,838	0	\$1,997	\$1,864	42	\$772	\$1,221
Governors Island NM	11,703	0	\$1,035	\$983	21	\$460	\$728
Grand Canyon NP	4,367,932	1,182,499	\$390,616	\$389,123	9,275	\$136,309	\$217,241
Grand Portage NM	63,310	67	\$6,644	\$6,616	158	\$2,318	\$3,694
Grand Teton NP	2,459,508	482,149	\$111,146	\$106,692	2,396	\$44,172	\$69,904
Grant-Kohrs Ranch NHS	18,629	0	\$638	\$595	14	\$208	\$332
Great Basin NP	76,848	29,319	\$3,747	\$3,590	86	\$1,258	\$2,004
Great Sand Dunes NP & Pres	279,523	45,743	\$9,756	\$9,158	218	\$3,208	\$5,113
Great Smoky Mountains NP	9,202,180	352,176	\$646,545	\$634,359	13,730	\$296,652	\$469,492
Greenbelt Park	200,000	23,990	\$12,908	\$12,099	262	\$5,658	\$8,955
Guadalupe Mountains NP	173,288	16,419	\$11,835	\$11,264	253	\$4,664	\$7,380
Guilford Courthouse NMP	390,626	0	\$19,099	\$17,826	400	\$7,380	\$11,679
Gulf Islands NS	1,603,770	33,246	\$33,199	\$20,751	466	\$8,591	\$13,596
Hagerman Fossil Beds NM	23,970	0	\$641	\$572	14	\$200	\$319
Haleakala NP	1,459,371	15,868	\$99,355	\$94,387	2,120	\$39,077	\$61,842
Hamilton Grange NMem	15,164	0	\$964	\$900	19	\$421	\$666
Hampton NHS	26,078	0	\$1,658	\$1,547	33	\$723	\$1,145
Harpers Ferry NHP	242,116	0	\$11,838	\$11,049	248	\$4,574	\$7,239
Harry S. Truman NHS	37,172	0	\$2,363	\$2,205	48	\$1,031	\$1,632
Hawaii Volcanoes NP	1,464,671	127,297	\$101,717	\$96,880	2,176	\$40,109	\$63,475
Herbert Hoover NHS	164,273	0	\$8,032	\$7,496	168	\$3,104	\$4,912
Home of Franklin D. Roosevelt NHS	107,849	0	\$6,855	\$6,398	0	\$0	\$0
Homestead National Monument of America	53,966	0	\$1,847	\$1,724	41	\$604	\$962
Hopewell Culture NHP	29,921	0	\$1,024	\$956	23	\$335	\$534
Hopewell Furnace NHS	51,796	0	\$2,532	\$2,364	53	\$979	\$1,549
Horseshoe Bend NMP	69,122	0	\$3,380	\$3,154	71	\$1,306	\$2,067
Hot Springs NP	1,369,627	10,234	\$93,243	\$88,574	1,989	\$36,671	\$58,033
Hovenweep NM	26,301	1,406	\$1,295	\$1,211	27	\$501	\$793
Hubbell Trading Post NHS	98,163	0	\$4,800	\$4,480	101	\$1,855	\$2,935
Independence NHP	4,051,705	0	\$139,859	\$125,215	2,710	\$58,556	\$92,672
Indiana Dunes NL	1,880,238	31,468	\$51,128	\$32,740	780	\$11,469	\$18,278
Isle Royale NP	17,276	52,236	\$1,796	\$1,796	43	\$629	\$1,003
James A. Garfield NHS	14,483	0	\$921	\$859	19	\$402	\$636
Jean Lafitte NHP & Pres	481,405	0	\$23,538	\$21,968	493	\$9,095	\$14,393

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

<b>Park</b>	<b>Public Use Data</b>		<b>Visitor Spending 2005 (\$000's)</b>		<b>Impacts of Non-local Visitor Spending</b>		
	<b>2005 Recreation Visits</b>	<b>2005 OVN stays</b>	<b>All Visitors</b>	<b>Non-local Visitors</b>	<b>Jobs</b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Jefferson National Expansion Memorial	2,940,367	0	\$110,170	\$98,505	2,132	\$46,065	\$72,904
Jewel Cave NM	103,067	0	\$5,039	\$4,703	106	\$1,947	\$3,082
Jimmy Carter NHS	83,684	0	\$2,864	\$2,673	64	\$936	\$1,492
John D Rockefeller Jr. Mem Pkwy	1,075,047	65,689	\$5,100	\$4,659	105	\$1,929	\$3,052
John Day Fossil Beds NM	124,486	300	\$4,262	\$3,978	95	\$1,394	\$2,221
John Fitzgerald Kennedy NHS	8,945	0	\$569	\$531	11	\$248	\$393
John Muir NHS	27,574	0	\$1,753	\$1,636	35	\$765	\$1,211
Johnstown Flood NMem	115,794	0	\$5,662	\$5,284	119	\$2,188	\$3,462
Joshua Tree NP	1,365,130	259,730	\$56,672	\$51,728	1,120	\$24,190	\$38,284
Kalaupapa NHP	61,059	0	\$2,985	\$2,786	63	\$1,154	\$1,826
Kaloko-Honokohau NHP	90,758	0	\$4,437	\$4,142	93	\$1,715	\$2,714
Katmai NP & Pres	57,217	7,750	\$2,882	\$2,752	66	\$964	\$1,537
Kenai Fjords NP	255,659	3,180	\$17,391	\$16,522	371	\$6,840	\$10,825
Kennesaw Mountain NBP	1,117,225	0	\$30,772	\$26,734	579	\$12,502	\$19,786
Kings Mountain NMP	259,146	86	\$12,670	\$11,826	266	\$4,896	\$7,748
Klondike Gold Rush NHP Alaska	546,814	6,658	\$18,716	\$17,474	417	\$6,121	\$9,755
Klondike Gold Rush NHP Seattle	70,604	0	\$4,488	\$4,188	91	\$1,959	\$3,100
Knife River Indian Villages NHS	34,705	0	\$1,188	\$1,109	26	\$388	\$619
Kobuk Valley NP	4,747	0	\$226	\$215	5	\$75	\$120
Korean War Veterans Memorial	3,249,773	0	\$88,537	\$79,429	1,719	\$37,144	\$58,786
Lake Chelan NRA	34,758	13,436	\$1,282	\$1,176	28	\$412	\$657
Lake Clark NP & Pres	5,458	1,950	\$354	\$338	8	\$140	\$222
Lake Mead NRA	7,723,366	746,146	\$260,780	\$214,820	5,120	\$75,251	\$119,930
Lake Meredith NRA	1,046,057	50,903	\$41,022	\$35,758	803	\$14,804	\$23,429
Lake Roosevelt NRA	1,280,167	114,219	\$36,046	\$31,609	753	\$11,073	\$17,647
Lassen Volcanic NP	366,398	73,961	\$13,281	\$11,688	253	\$5,466	\$8,650
Lava Beds NM	107,702	12,629	\$5,345	\$5,010	113	\$2,074	\$3,282
LBJ Memorial Grove on the Potomac	454,210	0	\$28,870	\$26,945	583	\$12,601	\$19,942
Lewis & Clark NHP	237,179	0	\$15,075	\$14,070	316	\$5,825	\$9,219
Lincoln Boyhood NMem	141,522	0	\$6,920	\$6,458	145	\$2,674	\$4,231
Lincoln Home NHS	406,806	0	\$19,890	\$18,564	417	\$7,686	\$12,163
Lincoln Memorial	3,617,421	0	\$98,553	\$88,415	1,914	\$41,346	\$65,436
Little Bighorn Battlefield NM	335,386	0	\$11,479	\$10,713	255	\$3,753	\$5,981
Little River Canyon NP	176,128	0	\$8,389	\$7,968	190	\$2,791	\$4,448
Longfellow NHS	35,292	0	\$1,726	\$1,610	36	\$667	\$1,055
Lowell NHP	728,368	0	\$46,296	\$43,209	935	\$20,206	\$31,979
Lyndon B. Johnson NHP	73,318	0	\$4,660	\$4,349	94	\$2,034	\$3,219
Maggie L. Walker NHS	8,560	0	\$171	\$90	2	\$37	\$59
Mammoth Cave NP	1,867,775	75,825	\$105,795	\$98,326	2,344	\$34,444	\$54,894
Manassas NBP	718,712	0	\$12,006	\$11,594	251	\$5,422	\$8,581
Manzanar NHS	76,870	0	\$2,631	\$2,455	59	\$860	\$1,371
Marsh-Billings-Rockefeller NHP	28,462	0	\$1,392	\$1,299	29	\$538	\$851
Martin Luther King, Jr. NHS	618,007	0	\$39,281	\$36,662	794	\$17,145	\$27,134
Martin Van Buren NHS	11,630	0	\$221	\$207	5	\$73	\$116
Mary McLeod Bethune Council House NHS	7,468	0	\$203	\$183	4	\$85	\$135

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

Park	Public Use Data		Visitor Spending 2005 (\$000's)		Impacts of Non-local Visitor Spending		
	2005 Recreation Visits	2005 OVN stays	All Visitors	Non-local Visitors	Jobs	Personal Income (\$000's)	Value Added (\$000's)
Mesa Verde NP	497,180	81,707	\$36,151	\$34,561	776	\$14,309	\$22,644
Minute Man NHP	1,048,648	0	\$66,654	\$62,209	1,346	\$29,092	\$46,041
Minuteman Missile NHS	7,506	0	\$477	\$445	11	\$156	\$249
Missouri National Recreational River	66,681	0	\$4,537	\$4,309	103	\$1,510	\$2,406
Mojave NPres	543,923	4,119	\$6,649	\$6,099	137	\$2,525	\$3,996
Monocacy NB	18,008	0	\$1,145	\$1,068	23	\$500	\$791
Montezuma Castle NM	622,628	0	\$30,442	\$28,413	638	\$11,763	\$18,616
Moore's Creek NB	48,988	0	\$1,677	\$1,565	37	\$548	\$874
Morristown NHP	268,616	0	\$13,134	\$12,258	275	\$5,075	\$8,031
Mount Rainier NP	1,205,256	178,677	\$31,995	\$30,591	687	\$12,665	\$20,043
Mount Rushmore NMem	2,052,967	0	\$69,309	\$66,547	1,495	\$27,551	\$43,601
Muir Woods NM	780,426	0	\$49,605	\$46,298	1,002	\$21,651	\$34,265
Natchez NHP	227,008	0	\$11,099	\$10,359	233	\$4,289	\$6,787
Natchez Trace Parkway	5,521,285	23,130	\$76,616	\$24,619	553	\$10,192	\$16,130
National Capital Parks Central	1,572,657	0	\$42,846	\$38,438	832	\$17,975	\$28,448
National Capital Parks East	1,743,993	0	\$47,513	\$42,626	923	\$19,934	\$31,548
National World War II Memorial	5,013,281	0	\$144,812	\$132,215	2,862	\$61,829	\$97,853
Natural Bridges NM	122,062	6,208	\$6,007	\$5,617	126	\$2,325	\$3,680
Navajo NM	63,636	3,327	\$3,130	\$2,926	66	\$1,212	\$1,917
New Bedford Whaling NHP	329,532	0	\$20,946	\$19,549	423	\$9,142	\$14,468
New Orleans Jazz NHP	55,412	0	\$2,709	\$2,529	57	\$1,047	\$1,657
New River Gorge NR	1,068,926	9,781	\$41,313	\$35,851	805	\$14,843	\$23,489
Nez Perce NHP	162,660	0	\$5,567	\$5,196	124	\$1,820	\$2,901
Nicomedeus NHS	29,505	0	\$1,010	\$942	22	\$330	\$526
Ninety Six NHS	32,510	0	\$1,590	\$1,484	33	\$614	\$972
Niobrara NSR	67,221	0	\$4,574	\$4,344	104	\$1,522	\$2,425
Noatak NPres	6,878	0	\$328	\$311	7	\$109	\$174
North Cascades NP	17,202	15,885	\$1,033	\$995	22	\$412	\$652
Obed Wild and Scenic River	184,573	1,410	\$7,125	\$6,181	139	\$2,559	\$4,050
Ocmulgee NM	117,595	0	\$5,750	\$5,366	121	\$2,222	\$3,516
Olympic NP	3,135,606	336,787	\$100,597	\$92,693	2,082	\$38,376	\$60,732
Oregon Caves NM	80,182	6,802	\$4,284	\$4,031	91	\$1,669	\$2,641
Organ Pipe Cactus NM	149,612	28,760	\$7,490	\$7,038	158	\$2,914	\$4,611
Ozark National Scenic Riverways	1,473,453	184,567	\$59,597	\$52,406	1,177	\$21,697	\$34,336
Padre Island NS	653,957	64,609	\$44,600	\$42,450	953	\$17,575	\$27,813
Palo Alto Battlefield NHS	24,480	0	\$838	\$782	19	\$274	\$437
Pea Ridge NMP	61,392	0	\$3,002	\$2,802	63	\$1,160	\$1,836
Pecos NHP	34,630	0	\$714	\$694	17	\$243	\$388
Pennsylvania Avenue NHS	219,864	0	\$5,990	\$5,374	116	\$2,513	\$3,977
Perry's Victory and Internatl Peace Mem	153,629	2,850	\$5,271	\$4,922	117	\$1,724	\$2,748
Petersburg NB	149,911	0	\$7,330	\$6,841	154	\$2,832	\$4,482
Petrified Forest NP	593,424	257	\$40,378	\$38,350	861	\$15,877	\$25,127
Petroglyph NM	99,464	0	\$4,105	\$3,240	70	\$1,515	\$2,398
Pictured Rocks NL	469,147	27,475	\$17,880	\$17,612	420	\$6,169	\$9,832
Pinnacles NM	170,067	0	\$3,493	\$3,037	72	\$1,064	\$1,696

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

Park	Public Use Data		Visitor Spending 2005 (\$000's)		Impacts of Non-local Visitor Spending		
	2005 Recreation Visits	2005 OVN stays	All Visitors	Non-local Visitors	Jobs	Personal Income (\$000's)	Value Added (\$000's)
Pipe Spring NM	54,946	0	\$2,687	\$2,507	56	\$1,038	\$1,643
Pipestone NM	69,716	0	\$4,052	\$3,966	95	\$1,389	\$2,214
Piscataway Park	182,025	0	\$4,959	\$4,449	96	\$2,081	\$3,293
Point Reyes NS	1,893,127	32,677	\$82,019	\$75,505	1,634	\$35,309	\$55,881
President's Park	1,207,983	0	\$32,910	\$29,525	639	\$13,807	\$21,852
Prince William Forest Park	232,558	69,793	\$7,369	\$5,762	125	\$2,695	\$4,264
Pu'uhonua o Honaunau NHP	542,452	0	\$26,522	\$24,754	556	\$10,248	\$16,219
Puukohola Heiau NHS	107,188	0	\$5,241	\$4,891	110	\$2,025	\$3,205
Rainbow Bridge NM	76,232	0	\$3,727	\$3,479	78	\$1,440	\$2,279
Redwood NP	401,359	12,352	\$17,347	\$15,167	341	\$6,279	\$9,937
Richmond NBP	71,695	0	\$4,271	\$3,849	86	\$1,594	\$2,522
Rio Grande Wild and Scenic River	294	2,281	\$10	\$10	0	\$4	\$6
Rock Creek Park	2,143,764	0	\$58,405	\$52,397	1,134	\$24,503	\$38,779
Rocky Mountain NP	2,778,915	203,589	\$189,023	\$185,428	4,420	\$64,955	\$103,521
Roger Williams NMem	49,566	0	\$3,150	\$2,940	64	\$1,375	\$2,176
Ross Lake NRA	304,646	36,286	\$8,476	\$7,432	177	\$2,604	\$4,149
Russell Cave NM	20,775	0	\$1,016	\$948	21	\$392	\$621
Sagamore Hill NHS	40,111	0	\$2,550	\$2,380	52	\$1,113	\$1,761
Saguaro NP	589,289	882	\$40,092	\$38,078	855	\$15,765	\$24,949
Saint Croix NSR	447,425	87,814	\$12,218	\$10,733	256	\$3,760	\$5,992
Saint Paul's Church NHS	13,971	0	\$888	\$829	18	\$388	\$613
Saint-Gaudens NHS	25,627	0	\$1,253	\$1,169	26	\$484	\$766
Salem Maritime NHS	747,115	0	\$47,488	\$44,321	959	\$20,727	\$32,803
Salinas Pueblo Missions NM	33,271	0	\$1,191	\$1,141	27	\$400	\$637
San Antonio Missions NHP	1,093,127	0	\$37,733	\$33,782	731	\$15,798	\$25,002
San Francisco Maritime NHP	3,975,040	11,142	\$73,237	\$54,167	1,172	\$25,330	\$40,089
San Juan Island NHP	248,831	0	\$15,816	\$14,762	319	\$6,903	\$10,925
San Juan NHS	1,060,733	0	\$51,863	\$48,405	1,087	\$20,040	\$31,714
Santa Monica Mountains NRA	495,562	144	\$17,777	\$10,539	228	\$4,928	\$7,800
Saratoga NHP	106,505	0	\$3,645	\$3,402	81	\$1,192	\$1,899
Saugus Iron Works NHS	15,703	0	\$998	\$932	20	\$436	\$689
Scotts Bluff NM	98,451	0	\$2,412	\$2,006	45	\$831	\$1,314
Sequoia NP/ Kings Canyon NP	1,204,984	394,514	\$81,062	\$74,972	1,684	\$31,039	\$49,121
Shenandoah NP	1,141,102	276,123	\$46,375	\$41,479	989	\$14,530	\$23,157
Shiloh NMP	280,387	0	\$9,596	\$8,957	213	\$3,137	\$5,000
Sitka NHP	291,764	0	\$9,986	\$9,320	222	\$3,265	\$5,203
Sleeping Bear Dunes NL	1,210,535	110,170	\$31,769	\$25,192	600	\$8,825	\$14,064
Springfield Armory NHS	25,262	0	\$1,606	\$1,499	32	\$701	\$1,109
Statue of Liberty NM	4,228,460	0	\$162,356	\$146,309	3,167	\$68,420	\$108,284
Steamtown NHS	96,508	0	\$3,303	\$3,083	73	\$1,080	\$1,721
Stones River NB	197,614	0	\$9,662	\$9,018	203	\$3,733	\$5,908
Sunset Crater Volcano NM	228,579	0	\$11,176	\$10,431	234	\$4,318	\$6,834
Tallgrass Prairie NPres	16,396	0	\$781	\$742	18	\$260	\$414
Thaddeus Kosciuszko NMem	4,391	0	\$279	\$260	6	\$122	\$193
Theodore Roosevelt Birthplace NHS	10,800	0	\$686	\$641	14	\$300	\$474

**Table A-1. Spending and Economic Impacts of National Park Visitors on Local Economies, FY 2005.**

<b>Park</b>	<b>Public Use Data</b>		<b>Visitor Spending 2005 (\$000's)</b>		<b>Impacts of Non-local Visitor Spending</b>		
	<b>2005 Recreation Visits</b>	<b>2005 OVN stays</b>	<b>All Visitors</b>	<b>Non-local Visitors</b>	<b>Jobs</b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Theodore Roosevelt Inaugural NHS	13,337	0	\$848	\$791	17	\$370	\$586
Theodore Roosevelt Island	106,237	0	\$6,753	\$6,302	136	\$2,947	\$4,664
Theodore Roosevelt NP	497,904	24,156	\$23,784	\$22,615	539	\$7,922	\$12,625
Thomas Jefferson Memorial	2,406,731	0	\$65,569	\$58,824	1,273	\$27,509	\$43,536
Thomas Stone NHS	4,407	0	\$280	\$261	6	\$122	\$193
Timpanogos Cave NM	105,012	0	\$6,675	\$6,230	135	\$2,913	\$4,611
Timucuan Ecological & Historic Pres	880,750	0	\$77,912	\$73,998	1,602	\$34,604	\$54,766
Tonto NM	72,470	0	\$3,543	\$3,307	74	\$1,369	\$2,167
Tumacacori NHP	46,948	0	\$1,607	\$1,500	36	\$525	\$837
Tuskegee Airmen NHS	10,164	0	\$497	\$464	10	\$192	\$304
Tuskegee Institute NHS	70,032	0	\$3,424	\$3,196	72	\$1,323	\$2,094
Tuzigoot NM	108,587	0	\$5,309	\$4,955	111	\$2,052	\$3,247
Ulysses S. Grant NHS	23,964	0	\$1,523	\$1,422	31	\$665	\$1,052
Upper Delaware SRR	250,950	0	\$6,764	\$5,863	140	\$2,054	\$3,273
USS Arizona Memorial	1,547,259	0	\$53,409	\$47,817	1,035	\$22,361	\$35,389
Valley Forge NHP	1,283,740	2,000	\$41,836	\$30,594	687	\$12,666	\$20,045
Vanderbilt Mansion NHS	374,977	0	\$10,479	\$8,843	191	\$4,135	\$6,545
Vicksburg NMP	796,167	0	\$38,927	\$36,332	816	\$15,042	\$23,804
Vietnam Veterans Memorial	3,908,149	0	\$106,474	\$95,521	2,067	\$44,669	\$70,695
Virgin Islands NP	807,197	137,912	\$88,250	\$88,250	1,982	\$36,537	\$57,821
Voyageurs NP	234,149	22,294	\$11,158	\$10,619	253	\$3,720	\$5,928
Walnut Canyon NM	130,471	0	\$6,379	\$5,954	134	\$2,465	\$3,901
War in the Pacific NHP	28,896	0	\$989	\$923	22	\$323	\$515
Washington Monument	328,237	0	\$8,943	\$27,448	627	\$13,548	\$21,441
Washita Battlefield NHS	15,531	0	\$523	\$488	12	\$171	\$273
Weir Farm NHS	11,355	0	\$722	\$674	15	\$315	\$499
Whiskeytown-Shasta-Trinity NRA	751,470	56,755	\$29,793	\$26,051	585	\$10,786	\$17,069
White House	451,867	0	\$12,311	\$11,044	239	\$5,165	\$8,174
White Sands NM	443,882	1,664	\$21,517	\$21,222	506	\$7,434	\$11,848
Whitman Mission NHS	54,128	0	\$1,853	\$1,729	41	\$606	\$965
William Howard Taft NHS	14,179	0	\$901	\$841	18	\$393	\$623
Wilson's Creek NB	201,298	0	\$9,842	\$9,186	206	\$3,803	\$6,019
Wind Cave NP	615,757	6,019	\$41,924	\$39,827	894	\$16,489	\$26,094
Wolf Trap NP for the Performing Arts	561,444	0	\$35,686	\$33,307	721	\$15,576	\$24,651
Women's Rights NHP	17,794	0	\$537	\$514	12	\$180	\$287
Wrangell-St Elias NP & Pres	56,224	0	\$2,678	\$2,544	61	\$891	\$1,420
Wright Brothers NMem	472,194	0	\$16,161	\$15,083	360	\$5,284	\$8,421
Wupatki NM	222,665	0	\$10,887	\$10,161	228	\$4,207	\$6,657
Yellowstone NP	2,828,536	1,188,739	\$278,050	\$264,720	5,945	\$109,597	\$173,442
Yosemite NP	3,212,298	1,566,499	\$345,340	\$337,661	8,048	\$118,282	\$188,510
Yukon-Charley Rivers NPres	12,842	24,926	\$518	\$507	12	\$177	\$283
Zion NP	2,587,781	270,916	\$94,690	\$90,003	2,021	\$37,262	\$58,969
Totals of Units Covered Above	272,605,876	13,486,481	\$10,422,859	\$9,392,980	211,216	\$3,925,476	\$6,221,873

**Table A-2. Economic Impacts of National Park Unit Payrolls and Benefits on Local Economies.**

<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Abraham Lincoln Birthplace NHS	592	128	20	24	807	893
Acadia NP	6,014	1,476	137	207	9,260	10,492
Adams NHS	1,205	285	29	43	1,901	2,184
Agate Fossil Beds NM	354	84	10	12	490	541
Alibates Flint Quarries NM <sup>19</sup>						
Allegheny Portage Railroad NHS	1,722	538	36	56	2,767	3,120
Amistad NRA	1,830	587	39	53	2,686	2,951
Andersonville NHS	690	191	14	19	983	1,083
Andrew Johnson NHS	434	100	9	14	662	751
Aniakchak NM & Pres <sup>19</sup>						
Antietam NB	2,140	622	30	55	3,392	3,830
Apostle Islands NL	1,971	523	42	57	2,783	3,069
Appomattox Court House NHP	934	248	25	36	1,457	1,649
Arches NP	838	261	18	24	1,222	1,344
Arkansas Post NMem	415	111	10	14	587	647
Arlington House, The Robert E. Lee Mem	709	190	19	27	1,140	1,306
Assateague Island NS	3,163	769	77	114	4,863	5,511
Aztec Ruins NM	874	238	23	34	1,369	1,548
Badlands NP	2,884	755	79	100	4,063	4,481
Bandelier NM	2,995	866	75	110	4,743	5,356
Bent's Old Fort NHS	898	235	22	29	1,265	1,395
Bering Land Bridge NPres <sup>19</sup>						
Big Bend NP	4,461	1,288	113	146	6,404	7,051
Big Cypress NPres	4,160	1,225	58	108	6,803	7,779
Big Hole NB <sup>19</sup>						
Big South Fork NRRRA	2,948	847	38	60	4,228	4,655
Big Thicket NPres	1,905	561	46	68	3,026	3,416
Bighorn Canyon NRA	2,464	572	48	67	3,398	3,755
Biscayne NP	2,341	679	49	77	3,818	4,367
Black Canyon of the Gunnison NP	857	215	23	29	1,198	1,323
Blue Ridge Parkway	11,181	2,973	259	389	17,446	19,736
Bluestone NSR	50	20	1	2	85	95
Booker T. Washington NM	532	160	11	17	849	958
Boston African American NHS	401	73	13	17	611	705
Boston NHP	5,611	1,519	110	178	9,043	10,360
Brown V. Board of Education NHS	582	178	14	21	958	1,095
Bryce Canyon NP	2,384	663	63	81	3,397	3,743
Buck Island Reef NM	208	55	5	7	294	324
Buffalo National River	3,794	1,107	97	126	5,459	6,009
Cabrillo NM	1,042	284	25	38	1,682	1,926
Canaveral NS	2,008	582	46	69	3,181	3,592

<sup>19</sup> For some parks, payroll data could not be obtained because the park payroll is grouped administratively with other units. The NPS System totals include administrative units as well as parks without visitation figures.

**Table A-2. Economic Impacts of National Park Unit Payrolls and Benefits on Local Economies.**

<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Cane River Creole NHP	842	184	25	31	1,150	1,272
Canyon de Chelly NM	1,052	277	28	40	1,639	1,854
Canyonlands NP	4,590	1,346	123	158	6,610	7,275
Cape Cod NS	5,389	1,323	109	149	7,504	8,285
Cape Hatteras NS	5,041	1,211	127	166	6,992	7,722
Cape Krusenstern NM <sup>19</sup>						
Cape Lookout NS	1,164	309	26	35	1,644	1,813
Capitol Reef NP	1,456	387	32	43	2,057	2,268
Capulin Volcano NM	493	126	13	17	692	763
Carl Sandburg Home NHS	715	166	18	26	1,091	1,237
Carlsbad Caverns NP	4,065	1,023	98	145	6,285	7,117
Casa Grande Ruins NM	552	177	13	17	810	890
Castillo de San Marcos NM	1,388	396	34	51	2,257	2,582
Castle Clinton NM	369	101	8	13	596	683
Catoctin Mountain Park	1,972	474	48	71	3,028	3,432
Cedar Breaks NM	318	56	8	11	420	466
Central High School NHS	391	116	11	15	622	702
Chaco Culture NHP	1,303	336	30	45	2,024	2,290
Chamizal NMem	1,164	305	28	42	1,867	2,140
Channel Islands NP	3,922	999	76	123	6,258	7,178
Charles Pinckney NHS	347	102	7	11	550	621
Chattahoochee River NRA	2,072	561	38	64	3,340	3,826
Chesapeake & Ohio Canal NHP	5,402	1,456	147	210	8,448	9,554
Chickamauga & Chattanooga NMP	1,710	455	42	62	2,668	3,018
Chickasaw NRA	2,635	705	74	94	3,727	4,109
Chiricahua NM	1,116	305	28	41	1,750	1,979
Christiansted NHS	610	157	20	25	857	945
City of Rocks NRes	6	0	3	3	8	10
Clara Barton NHS	265	57	9	12	413	475
Colonial NHP	4,510	1,259	98	150	7,096	8,020
Colorado NM	859	213	22	32	1,326	1,501
Congaree NP	559	152	14	21	875	990
Coronado NMem	688	203	15	20	993	1,093
Cowpens NB	360	95	11	15	560	634
Crater Lake NP	3,290	839	82	121	5,098	5,771
Craters of the Moon NM & Pres	767	221	14	20	1,101	1,212
Cumberland Gap NHP	2,191	581	60	85	3,417	3,866
Cumberland Island NS	1,362	442	30	46	2,205	2,484
Curecanti NRA	2,265	562	54	81	3,493	3,957
Cuyahoga Valley NP	7,304	2,091	162	250	11,885	13,599
Dayton Aviation Heritage NHP	1,023	255	27	39	1,627	1,867
De Soto NMem	298	86	9	13	486	556
Death Valley NP	5,798	1,403	138	181	8,052	8,892
Delaware Water Gap NRA	6,733	1,736	124	203	10,450	11,829
Denali NP & Pres	9,392	1,965	180	290	14,121	16,045
Devils Postpile NM	200	43	5	7	273	302

**Table A-2. Economic Impacts of National Park Unit Payrolls and Benefits on Local Economies.**

<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Devils Tower NM	786	186	21	26	1,088	1,202
Dinosaur NM	2,207	558	54	71	3,089	3,409
Dry Tortugas NP	681	194	15	23	1,106	1,266
Edgar Allan Poe NHS	270	80	7	10	443	506
Edison NHS	1,256	319	22	38	2,003	2,298
Effigy Mounds NM	758	156	24	30	1,026	1,136
Eisenhower NHS	860	219	19	29	1,332	1,508
El Malpais NM	970	293	26	33	1,405	1,546
El Morro NM	480	136	13	17	685	755
Eleanor Roosevelt NHS	207	39	7	8	276	306
Eugene O'Neill NHS	251	64	6	9	401	460
Everglades NP	13,629	3,768	265	430	22,046	25,243
Federal Hall NMem	300	61	6	10	463	533
Fire Island NS	2,838	615	46	79	4,289	4,870
Florissant Fossil Beds NM	499	149	14	20	795	897
Ford's Theatre NHS	728	190	16	25	1,166	1,337
Fort Bowie NHS	280	88	7	10	450	508
Fort Caroline NMem	1,346	367	30	46	2,172	2,487
Fort Davis NHS	853	224	22	29	1,203	1,326
Fort Donelson NB	703	193	17	22	999	1,101
Fort Frederica NM	545	160	13	20	865	977
Fort Laramie NHS	946	258	25	32	1,343	1,480
Fort Larned NHS	724	184	18	24	1,015	1,120
Fort Matanzas NM	89	24	2	3	143	164
Fort McHenry NM & HS	1,413	333	36	53	2,228	2,559
Fort Necessity NB	1,087	336	23	32	1,582	1,740
Fort Point NHS	238	50	5	8	369	424
Fort Pulaski NM	696	189	15	24	1,089	1,232
Fort Raleigh NHS	223	58	6	7	314	347
Fort Scott NHS	760	190	16	22	1,061	1,171
Fort Smith NHS	509	146	13	19	805	910
Fort Stanwix NM	897	217	25	32	1,246	1,376
Fort Sumter NM	1,201	341	28	43	1,952	2,234
Fort Union NM	523	157	16	20	757	832
Fort Union Trading Post NHS	489	100	10	14	661	732
Fort Vancouver NHS	1,098	260	15	28	1,681	1,906
Fort Washington Park <sup>19</sup>						
Fossil Butte NM	441	104	11	14	610	674
Franklin Delano Roosevelt Memorial <sup>19</sup>						
Frederick Douglass NHS	325	69	10	14	505	581
Frederick Law Olmsted NHS	1,730	473	39	60	2,793	3,199
Fredericksburg & Spotsylvania NMP	2,559	629	55	85	3,941	4,465
Friendship Hill NHS	293	113	6	9	506	575
Gates of the Arctic NP & Pres	1,319	307	36	46	1,819	2,010
Gateway NRA	16,240	3,821	352	548	25,599	29,409
Gauley River NRA	137	55	3	4	232	260

**Table A-2. Economic Impacts of National Park Unit Payrolls and Benefits on Local Economies.**

<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
General Grant NMem	469	141	8	13	770	880
George Rogers Clark NHP	533	141	12	18	832	941
George Washington Birthplace NM	1,052	274	24	37	1,635	1,851
George Washington Carver NM	592	157	17	24	924	1,045
George Washington Memorial Pkwy	6,724	1,814	167	248	10,830	12,408
Gettysburg NMP	4,216	1,010	82	132	6,467	7,331
Gila Cliff Dwellings NM	165	24	4	5	213	237
Glacier Bay NP & Pres	3,774	863	66	95	5,191	5,738
Glacier NP	11,533	2,496	289	424	17,424	19,786
Glen Canyon NRA	7,431	2,040	160	247	11,658	13,180
Golden Gate NRA	19,444	5,159	388	624	31,234	35,796
Golden Spike NHS	571	133	12	19	872	989
Governors Island NM	421	97	9	15	662	761
Grand Canyon NP	21,672	5,639	418	671	33,691	38,129
Grand Portage NM	584	163	14	18	832	917
Grand Teton NP	9,219	2,394	223	331	14,328	16,216
Grant-Kohrs Ranch NHS	861	233	22	28	1,220	1,345
Great Basin NP	1,837	459	45	58	2,566	2,833
Great Sand Dunes NP & Pres	1,326	343	33	43	1,864	2,056
Great Smoky Mountains NP	14,037	4,083	338	508	22,907	26,200
Greenbelt Park	619	154	14	21	985	1,130
Guadalupe Mountains NP	1,766	551	41	62	2,837	3,199
Guilford Courthouse NMP	469	138	10	15	745	841
Gulf Islands NS	5,293	1,324	117	179	8,175	9,259
Hagerman Fossil Beds NM	502	129	14	18	705	778
Haleakala NP	3,497	854	84	124	5,380	6,096
Hamilton Grange NMem	123	35	5	7	201	230
Hampton NHS	653	142	16	24	1,018	1,171
Harpers Ferry NHP	4,262	1,210	103	153	6,727	7,600
Harry S. Truman NHS	833	244	19	29	1,362	1,557
Hawaii Volcanoes NP	6,084	1,549	135	206	9,424	10,670
Herbert Hoover NHS	771	186	20	29	1,184	1,342
Home of Franklin D. Roosevelt NHS	813	209	20	30	1,261	1,428
Homestead National Monument of America	572	173	15	20	829	912
Hopewell Culture NHP	651	151	18	23	897	991
Hopewell Furnace NHS	866	216	20	30	1,337	1,514
Horseshoe Bend NMP	483	141	11	17	766	864
Hot Springs NP	2,853	868	81	114	4,561	5,146
Hovenweep NM	343	114	8	12	558	628
Hubbell Trading Post NHS	742	143	19	27	1,104	1,256
Independence NHP	11,077	3,112	210	344	17,965	20,564
Indiana Dunes NL	5,833	1,705	125	169	8,394	9,240
Isle Royale NP	2,624	663	46	65	3,672	4,053
James A. Garfield NHS	104	29	2	4	169	193
Jean Lafitte NHP & Pres	2,951	864	60	95	4,683	5,287
Jefferson National Expansion Memorial	7,067	2,094	178	263	11,571	13,229

**Table A-2. Economic Impacts of National Park Unit Payrolls and Benefits on Local Economies.**

<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Jewel Cave NM	740	165	22	31	1,122	1,274
Jimmy Carter NHS	674	205	16	21	978	1,075
John D Rockefeller Jr. Mem Pkwy	320	93	7	11	508	574
John Day Fossil Beds NM	928	247	23	30	1,312	1,446
John Fitzgerald Kennedy NHS	227	49	5	8	354	407
John Muir NHS	492	127	12	18	788	903
Johnstown Flood NMem	326	106	10	13	528	595
Joshua Tree NP	4,308	1,184	111	163	6,961	7,972
Kalaupapa NHP	1,661	428	37	56	2,579	2,919
Kaloko-Honokohau NHP	860	213	19	29	1,325	1,502
Katmai NP & Pres	2,027	419	38	54	2,743	3,037
Kenai Fjords NP	1,626	366	23	42	2,470	2,803
Kennesaw Mountain NBP	728	192	14	23	1,168	1,339
Kings Mountain NMP	752	179	17	25	1,152	1,306
Klondike Gold Rush NHP Alaska	1,693	359	33	45	2,300	2,545
Klondike Gold Rush NHP Seattle	291	83	9	13	473	542
Knife River Indian Villages NHS	517	142	13	17	735	810
Kobuk Valley NP <sup>19</sup>						
Korean War Veterans Memorial <sup>19</sup>						
Lake Chelan NRA <sup>19</sup>						
Lake Clark NP & Pres	1,262	301	22	37	1,935	2,194
Lake Mead NRA	10,709	2,844	222	303	15,125	16,677
Lake Meredith NRA	1,807	513	48	69	2,852	3,222
Lake Roosevelt NRA	3,207	861	74	98	4,539	5,004
Lassen Volcanic NP	3,839	909	62	109	6,057	6,958
Lava Beds NM	1,402	344	34	50	2,159	2,446
LBJ Memorial Grove on the Potomac <sup>19</sup>						
Lewis & Clark NHP	934	237	24	35	1,446	1,637
Lincoln Boyhood NMem	589	139	16	23	901	1,022
Lincoln Home NHS	1,808	430	48	69	2,771	3,141
Lincoln Memorial <sup>19</sup>						
Little Bighorn Battlefield NM	823	185	20	27	1,129	1,248
Little River Canyon NP	635	180	17	21	908	1,000
Longfellow NHS <sup>19</sup>						
Lowell NHP	5,110	1,334	106	168	8,186	9,384
Lyndon B. Johnson NHP	2,417	681	57	86	3,923	4,490
Maggie L. Walker NHS <sup>19</sup>						
Mammoth Cave NP	5,607	1,357	183	226	7,788	8,601
Manassas NBP	1,610	463	31	51	2,623	3,000
Manzanar NHS	584	165	16	20	835	919
Marsh-Billings-Rockefeller NHP	1,037	226	24	36	1,568	1,780
Martin Luther King, Jr. NHS	1,716	393	35	56	2,695	3,098
Martin Van Buren NHS	722	158	18	23	985	1,090
Mary McLeod Bethune Council House NHS <sup>19</sup>						
Mesa Verde NP	5,282	1,212	126	188	8,050	9,131
Minute Man NHP	1,660	425	36	56	2,651	3,040

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	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Minuteman Missile NHS	233	78	6	8	345	379
Missouri National Recreational River	356	95	9	0	0	0
Mojave NPRES	2,695	720	58	90	4,208	4,760
Monocacy NB	788	233	14	23	1,290	1,475
Montezuma Castle NM	1,133	244	28	41	1,711	1,943
Moore's Creek NB	360	86	12	15	499	551
Morristown NHP	1,501	445	30	48	2,388	2,696
Mount Rainier NP	8,900	2,093	221	325	13,613	15,436
Mount Rushmore NMem	3,041	873	72	107	4,810	5,433
Muir Woods NM	449	111	10	15	713	818
Natchez NHP	864	251	20	30	1,369	1,546
Natchez Trace Parkway	6,419	2,054	147	222	10,364	11,679
National Capital Parks Central <sup>19</sup>						
National Capital Parks East <sup>19</sup>						
National World War II Memorial <sup>19</sup>						
Natural Bridges NM	302	72	7	11	463	525
Navajo NM	575	122	16	22	866	984
New Bedford Whaling NHP	375	104	7	12	607	695
New Orleans Jazz NHP	258	80	7	10	414	466
New River Gorge NR	4,771	1,367	102	158	7,542	8,519
Nez Perce NHP	1,641	475	40	53	2,358	2,595
Nicomachus NHS	200	57	5	6	287	316
Ninety Six NHS	284	83	6	9	450	508
Niobrara NSR	310	108	7	10	464	509
Noatak NPRES <sup>19</sup>						
North Cascades NP	5,850	1,592	165	233	9,164	10,362
Obed Wild and Scenic River	385	117	9	14	616	694
Ocmulgee NM	598	165	15	22	939	1,062
Olympic NP	8,736	2,185	211	313	13,493	15,283
Oregon Caves NM	835	198	23	33	1,278	1,449
Organ Pipe Cactus NM	2,062	639	37	61	3,308	3,730
Ozark National Scenic Riverways	4,592	1,316	94	148	7,259	8,200
Padre Island NS	2,656	722	62	93	4,160	4,704
Palo Alto Battlefield NHS	471	138	12	16	678	747
Pea Ridge NMP	690	167	20	28	1,060	1,201
Pecos NHP	964	273	25	32	1,379	1,519
Pennsylvania Avenue NHS <sup>19</sup>						
Perry's Victory and Internatl Peace Mem	617	151	16	20	858	948
Petersburg NB	1,794	505	36	57	2,827	3,195
Petrified Forest NP	2,473	662	59	88	3,863	4,370
Petroglyph NM	1,090	283	25	38	1,745	2,001
Pictured Rocks NL	1,405	327	31	41	1,939	2,143
Pinnacles NM	1,947	521	42	57	2,755	3,037
Pipe Spring NM	602	154	17	24	933	1,056
Pipstone NM	510	138	13	17	723	797
Piscataway Park <sup>19</sup>						

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<b>Park</b>	<b>Park Payroll</b>			<b>Impacts of Park Payroll</b>		
	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Point Reyes NS	5,471	1,493	122	189	8,830	10,114
President's Park <sup>19</sup>						
Prince William Forest Park	1,929	509	50	74	3,096	3,549
Pu'uhonua o Honaunau NHP	978	242	24	36	1,507	1,708
Puukohola Heiau NHS	477	102	11	17	720	817
Rainbow Bridge NM	98	23	3	4	149	169
Redwood NP	5,514	1,530	124	189	8,668	9,797
Richmond NBP	1,853	507	43	64	2,906	3,286
Rio Grande Wild and Scenic River	132	47	4	5	199	219
Rock Creek Park	3,375	909	76	117	5,435	6,227
Rocky Mountain NP	11,153	2,635	290	374	15,426	17,043
Roger Williams NMem	274	79	9	12	446	510
Ross Lake NRA <sup>19</sup>						
Russell Cave NM	216	63	7	9	343	387
Sagamore Hill NHS	875	205	22	32	1,379	1,584
Saguaro NP	2,594	754	68	98	4,112	4,644
Saint Croix NSR	2,287	598	51	68	3,220	3,552
Saint Paul's Church NHS <sup>19</sup>						
Saint-Gaudens NHS	739	213	16	25	1,170	1,322
Salem Maritime NHS	1,388	328	35	52	2,189	2,515
Salinas Pueblo Missions NM	1,050	257	31	39	1,462	1,614
San Antonio Missions NHP	2,016	624	46	71	3,328	3,800
San Francisco Maritime NHP	4,786	1,243	85	143	7,661	8,784
San Juan Island NHP	524	129	12	18	831	954
San Juan NHS	2,545	611	78	107	3,906	4,427
Santa Monica Mountains NRA	4,793	1,388	89	147	7,815	8,940
Saratoga NHP	1,363	368	32	42	1,931	2,129
Saugus Iron Works NHS	595	163	14	21	961	1,101
Scotts Bluff NM	547	128	14	20	837	949
Sequoia NP/ Kings Canyon NP	13,074	3,222	299	451	20,145	22,822
Shenandoah NP	8,634	2,530	216	320	14,108	16,133
Shiloh NMP	1,240	341	30	40	1,762	1,942
Sitka NHP	1,149	249	22	31	1,566	1,733
Sleeping Bear Dunes NL	2,995	649	51	73	4,083	4,517
Springfield Armory NHS	718	186	14	23	1,149	1,317
Statue of Liberty NM	7,494	1,960	184	274	12,009	13,768
Steamtown NHS	3,368	971	72	97	4,834	5,322
Stones River NB	727	169	21	30	1,110	1,259
Sunset Crater Volcano NM <sup>19</sup>						
Tallgrass Prairie NPres	523	120	13	17	719	795
Thaddeus Kosciuszko NMem	99	30	3	4	164	187
Theodore Roosevelt Birthplace NHS	218	67	5	7	359	410
Theodore Roosevelt Inaugural NHS	9	2	1	2	14	16
Theodore Roosevelt Island <sup>19</sup>						
Theodore Roosevelt NP	1,751	486	52	66	2,495	2,748
Thomas Jefferson Memorial <sup>19</sup>						

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	<b>Salary (\$000's)</b>	<b>Payroll Benefits (\$000's)</b>	<b>Jobs</b>	<b>Jobs<sup>a</sup></b>	<b>Personal Income (\$000's)</b>	<b>Value Added (\$000's)</b>
Thomas Stone NHS	226	55	10	13	358	412
Timpanogos Cave NM	943	208	32	44	1,472	1,693
Timucuan Ecological & Historic Pres <sup>19</sup>						
Tonto NM	650	171	14	22	1,013	1,146
Tumacacori NHP	723	190	16	22	1,018	1,123
Tuskegee Airmen NHS	306	94	9	13	490	552
Tuskegee Institute NHS	634	180	14	21	1,000	1,130
Tuzigoot NM <sup>19</sup>						
Ulysses S. Grant NHS	569	159	16	23	922	1,056
Upper Delaware SRR	1,704	453	31	44	2,407	2,654
USS Arizona Memorial	1,512	345	36	54	2,373	2,728
Valley Forge NHP	3,994	1,085	67	114	6,255	7,073
Vanderbilt Mansion NHS	647	163	18	26	1,030	1,182
Vicksburg NMP	1,742	481	48	69	2,736	3,093
Vietnam Veterans Memorial <sup>19</sup>						
Virgin Islands NP	3,167	870	84	108	4,502	4,962
Voyageurs NP	2,670	748	57	77	3,810	4,197
Walnut Canyon NM <sup>19</sup>						
War in the Pacific NHP	654	142	13	18	893	987
Washington Monument <sup>19</sup>						
Washita Battlefield NHS	329	76	9	12	453	501
Weir Farm NHS	547	150	13	19	883	1,011
Whiskeytown-Shasta-Trinity NRA	2,948	863	81	115	4,679	5,283
White House <sup>19</sup>						
White Sands NM	997	293	24	32	1,437	1,581
Whitman Mission NHS	531	137	13	17	746	823
William Howard Taft NHS	368	103	9	13	597	683
Wilson's Creek NB	1,269	336	19	34	1,979	2,239
Wind Cave NP	2,355	661	61	89	3,710	4,192
Wolf Trap NP for the Performing Arts	2,432	507	63	92	3,769	4,339
Women's Rights NHP	795	219	17	23	1,131	1,246
Wrangell-St Elias NP & Pres	3,454	701	59	85	4,661	5,162
Wright Brothers NMem	467	102	10	13	638	705
Wupatki NM	2,440	613	53	81	3,771	4,271
Yellowstone NP	26,513	6,833	561	870	41,151	46,580
Yosemite NP	26,757	6,712	697	900	37,398	41,277
Yukon-Charley Rivers NPres	996	239	27	35	1,382	1,526
<u>Zion NP</u>	<u>6,775</u>	<u>1,846</u>	<u>185</u>	<u>264</u>	<u>10,615</u>	<u>12,002</u>
Totals of Units with Visit Counts	752,582	197,381	17,207	25,256	1,151,551	1,300,033
NPS System Totals	\$1,125,039	\$289,683	23,978	35,186	\$1,720,933	\$1,942,728

a. Job impacts include the NPS jobs immediately to the left plus the additional jobs generated through secondary effects of park employee spending of their incomes in the local region. Job estimates are not full-time equivalents, but include part-time positions. Seasonal jobs are converted to an annual basis, i.e., four jobs for three months each equates to one job.

## About the NPS Social Science Program

The role and functions of the NPS Social Science Program are to: provide leadership and direction to the social science activities of the NPS, coordinate social science activities with other programs of the NPS, act as liaison with the USGS Biological Resources Division and other federal agencies on social science activities, provide technical support to parks, park clusters, support offices, and regional offices, and support a program of applied social science research related to national research needs of the NPS.



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